

Virginia

Standards of Learning Guided Practice Suggestions

**For use with the Grade 4 Mathematics
Practice Items in TestNav™ 8**

March, 2016

Table of Contents

Change Log.....	2
Introduction to TestNav™ 8 Document.....	3
Guided Practice Suggestions.....	3
Grade 4 Mathematics Practice Item Information and Recommended Guided Practice Suggestions	4

Change Log

Updates to this document will be reflected in the table.

Change Log		
Version	Date	Description
V.1	03/30/2016	Original Document Posted.

Introduction to TestNav™ 8 Document

The [*Introduction to TestNav 8*](#) document serves as an introduction to the new online navigation, online tools, accessibility features, and overall functionality and appearance of TestNav 8. It is highly recommended that teachers (or other adults) read the *Introduction to TestNav 8* document prior to reading this guide, the *Guided Practice Suggestions* for the Grade 4 Mathematics practice item set.

Reading the *Introduction to TestNav 8* document will give teachers an understanding of the features of TestNav 8 prior to working with students. In part, the document provides information on-

- opening the practice item sets within the required TestNav 8 Application,
- navigating through the practice item sets;
- answering technology-enhanced items (TEI) and multiple-choice items;
- using the online tools, and
- using the accessibility features available in TestNav 8.

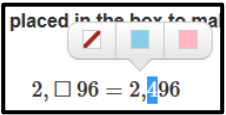
This important information should be used in conjunction with the information found in this guide.


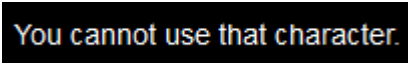
Guided Practice Suggestions

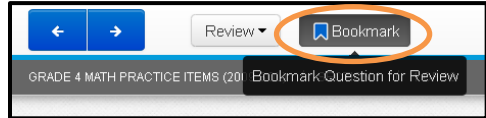
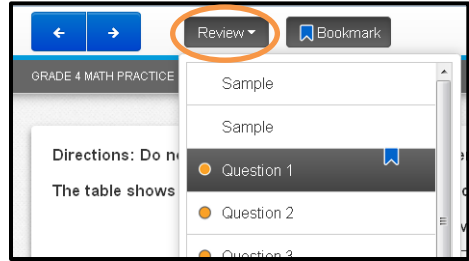
This guide provides specific item information (item type, SOL, and answer) for each question in the Grade 4 Mathematics practice item set, in table format. Along with the item information in the table, there is a column titled “Guided Practice Suggestions.” This column contains information for teachers as they guide students through the practice items. For instance, guided practice suggestions can state, “Use the eliminator tool to place a red ‘X’ on the answers that are not correct,” or, “Make sure students know how to select draggers and place them in the empty boxes using their mouse, keypad, or touch screen.” Following the suggestions in the table will ensure that students are exposed to all of the different tools within TestNav 8, the different functionality features of TEI, and common messages that may appear as students complete TEI.


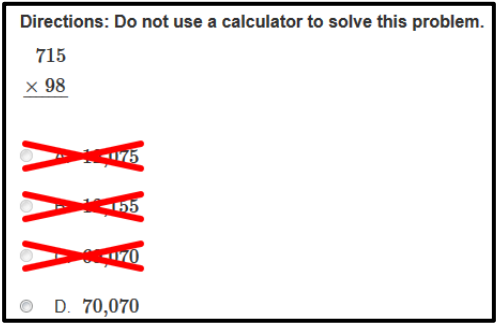
Grade 4 Mathematics Practice Item Information and Recommended Guided Practice Suggestions

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
Section 1 (Two Sample Items and Questions 1-10) The questions in first section of the test are numbered sequentially from 1 to 10. Complete without the use of a calculator.					
1	Sample A	MC		C 4	<p>Have students practice zooming in to look at the question on the screen, and then have them zoom out.</p> <p>On a PC or Chromebook, press the CTRL and + keys at the same time to zoom in. Press the CTRL and – keys at the same time to zoom out. Press the CTRL and 0 keys at the same time to return to the default screen size.</p> <p>On a Mac, press the CMD and + keys at the same time to zoom in. Press the CMD and – keys at the same time to zoom out. Press the CMD and 0 keys at the same time to return to the default screen size.</p> <p>On a touch screen, touch two points on the screen, and then move your fingers away from each other to zoom in. Touch two points on the screen, and then move your fingers toward each other to zoom out.</p>

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
1	Sample A (Cont.)				<p>Have students use the highlighter tool to highlight the “4” in 2,496. It may be easier to highlight the number if the student zooms in on the question first.</p> <p>To highlight using a keyboard, place the cursor next to the first “4,” left click, hold down, and drag over the number. Then select the highlighter color.* To remove the highlight, left click, hold down, and drag over the “4.” Then select the white box on the left with the red line.</p> <p>On a touch screen, hold down on the number with a finger, and adjust the area to be highlighted with the blue anchors. Then select the highlighter color.* To remove the highlight, hold down on the number with a finger, then select the white box on the left with the red line.</p>  <p>*Pink and blue are the two highlighter colors available when the foreground and background settings are set to the default (black text on white background). These colors may change when the foreground and background setting is changed. Practice with changing the foreground and background colors will be done on question 20 in Section 2 of this practice item set.</p>

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
1	Sample A (Cont.)				<p>Throughout the practice item set, move to the next or previous screen in a section by selecting an arrow in the top left corner of the screen. A blue arrow indicates the button is active and can be selected.</p>  <p>Before proceeding to the next question, make sure students adjust the zoom so they are at the default screen size.</p>
1	Sample B	TEI Fill-in-the-Blank		34.7	<p>Have students attempt to enter a character that cannot be used as part of the answer. A message will appear that states:</p>  <p>This message will remain on the screen for approximately three seconds.</p> <p>Tell students that the answer does not need to be as long as the response box.</p> <p>Information for teachers: Answers with leading zeros or trailing zeros would be scored as correct (e.g., 034.7, 34.70, 034.70, etc.).</p>

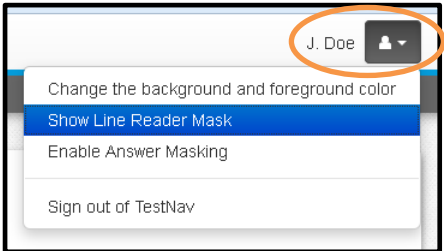
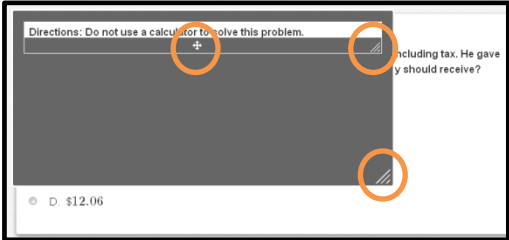
Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
1	1	MC	4.4a	B 300 miles	<p>Have students select the <i>Bookmark</i> button and tell them that when they select the <i>Bookmark</i> button, it will turn dark gray. This button would be used to mark a question for review at a later time.</p>  <p>Then have students select the <i>Review</i> button. A drop-down menu will appear. All of the questions in the current section will be listed. The question that the student is viewing on the screen will be shaded dark gray. This question has an orange circle next to it because it has not yet been answered. This question will also have a blue flag next to it because it was just bookmarked.</p>  <p>Have students practice using the scroll bar to see the status of each question in the drop-down menu.</p> <p>Have students close the <i>Review</i> drop-down menu and deselect the <i>Bookmark</i> button. Then, tell them to look at the <i>Review</i> drop-down menu again to see that the question no longer has a blue flag.</p>

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
1	2	MC	4.4b	D 70,070	<p>Have students select the eliminator tool located in the toolbar and then place a red “X” on the answers that are not correct.</p>  <p>To remove an “X” keep the eliminator tool active and select the “X” to remove it. Have students practice removing an “X.”</p>  <p>Tell students: Multiple-choice items must be answered in TestNav 8 by selecting the letter of the answer option or the option itself using the mouse, keypad, or touch screen. On multiple-choice items, once an answer is selected, the item cannot be returned to an unanswered state (no answer selected) unless the student uses the eliminator tool to place an “X” over the selected answer and then deselects the “X”.</p> <p>Remind students that placing an “X” on the incorrect answer choices does not complete the item. A selection must be made with the cursor tool in order for the item to be considered “Answered.”</p>

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
1	3	TEI Fill-in-the-blank	4.4c	49R5 or 49r5	<p>Make sure students understand that a blank space is not an allowable character, so a blank space cannot be entered between the characters in the dividend (i.e., 49 R 5 cannot be entered).</p> <p>A blank space can never be entered into a response box. If a student tries to enter a blank space, this message will appear:</p> <p>You cannot use that character.</p>
1	4	MC	4.4d	D 108	
1	5	MC	4.4d	D 3,456	

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
1	6	TEI Hot Spot	4.5a	All of these numbers and only these numbers should be selected: 1, 2, 4, and 8	<p>This is a type of hot spot technology-enhanced item. To answer this question correctly, all correct answers in the gray box must be selected. A blue box outlines the answer choice when it is selected, indicating a student has chosen that response as an answer. In order to deselect an answer and remove the blue box, the answer choice must be selected again.</p> <div> <p>Directions: Select all the correct answers. Identify the numbers that are common factors of 16 and 24.</p> <p>1 2 3 4 6 8 10 16 24</p> </div> <p>Tell students that when there are an unspecified number of answers, the question will be considered “Answered” when one answer has been selected. This is so no clue or hint is given as to how many answers are correct.</p> <p>Have students practice selecting and deselecting an answer.</p>
1	7	MC	4.5a	D 72	
1	8	TEI Fill-in-the-blank	4.5c	8.72	<p>Tell students that if a fill-in-the-blank question has an answer with four or more digits, it will be scored as correct with or without the use of commas. If a comma is used, it must be in the correct location within the number.</p> <p>Information for teachers: Answers with leading zeros or trailing zeros would be scored as correct (e.g., 08.72, 8.720, 08.720, etc.).</p>

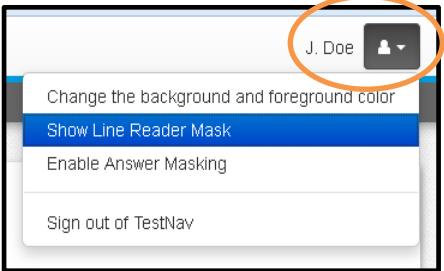
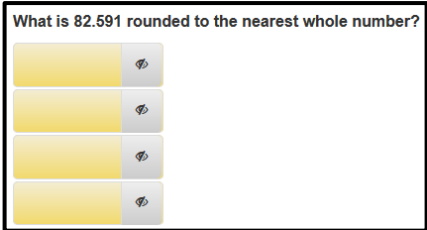
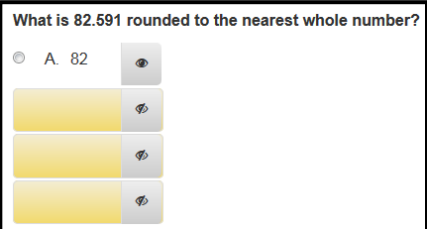
Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
1	9	TEI Fill-in-the-blank	4.5d	$\frac{1}{4}$ (entered as 1/4)	Make sure students know how to enter the fraction key (the “forward slash” key).

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
1	10	MC	4.5d	A \$2.94	<p>Have students practice using the Line Reader Mask accessibility feature with this item. Select the user drop-down menu and <i>Show Line Reader Mask</i> from the menu.</p>  <p>The Line Reader Mask will appear over the item. Have students use the diagonal line areas to practice resizing the area covered by the line reader and the window through which content can be seen. Have students use the cross to move just the window through which content can be seen. Hold down on any part of the gray area and drag the tool to move the entire tool.</p>  <p>To turn off the Line Reader Mask, select the drop-down menu and select <i>Hide Line Reader Mask</i>. If the student does not turn off the Line Reader Mask, it will automatically turn off when the student navigates away from the item.</p>


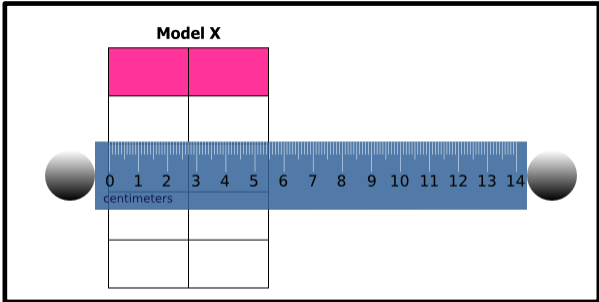
Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
<p>Section Break</p> <p>Guide students through the End of Section 1 screen and into the second section of the test (see pages 20-23 of the <i>Introduction to TestNav 8</i> document).</p> <p>Section 2 (Questions 1-20)</p> <p>The questions in the second section of the test are numbered sequentially from 1 to 20.</p> <p>A calculator may be used to complete these questions.</p>					

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	1	TEI Drag and Drop	4.1a	Answers from top to bottom: Tenths; Thousands; Tens; Ones; Hundreds; Hundredths	<p>Have students select draggers and place them in the empty boxes using the mouse, keypad, or touch screen.</p> <p>Selecting a dragger and moving it to an empty box causes the remaining draggers to shift location in the answer option area.</p> <p>Have students practice moving draggers back to the gray box. The gray box will expand as draggers are added back to it. Draggers will go back to their original location when returned to the gray box.</p> <p>Have students try to place one dragger “over” another dragger. This cannot be done. If a student wishes to change an answer, the dragger must be moved back to the gray box and another option must be selected and moved into the response box.</p> <p>As soon as a dragger is selected and moved, all of the boxes shade blue. This indicates that the dragger can be placed in any box - whichever location the student chooses as the correct location.</p> <p>This item will not be considered “Answered” until each box has an answer in it.</p>



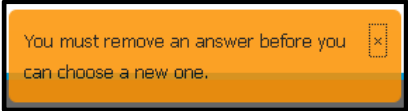
Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	2	MC	4.2b	D Model 3 and Model 4	<p>Have students practice zooming in to look at the models on the screen, and then have them zoom out.</p> <p>On a PC or Chromebook, press the CTRL and + keys at the same time to zoom in. Press the CTRL and – keys at the same time to zoom out. Press the CTRL and 0 keys at the same time to return to the default screen size.</p> <p>On a Mac, press the CMD and + keys at the same time to zoom in. Press the CMD and – keys at the same time to zoom out. Press the CMD and 0 keys at the same time to return to the default screen size.</p> <p>On a touch screen, touch two points on the screen, and then move your fingers away from each other to zoom in. Touch two points on the screen, and then move your fingers toward each other to zoom out.</p> <p>As students are practicing how to zoom in and out, make sure they are doing so within reason. If students zoom in too far, they may not be able to see all of the information necessary to answer the question. . It should also be noted that zooming in and out on the screen may cause the text wrapping to change. Remind students that they should only use this feature when necessary.</p>
2	3	MC	4.2c	C $\frac{4}{5}$	

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	4	MC	4.3b	D 83	<p>Have students practice using the Answer Masking accessibility feature with this item. Select the user drop-down menu in the top right corner of the screen and select <i>Enable Answer Masking</i> from the menu.</p>  <p>The answer options will now be masked as shown in the screenshot.</p>  <p>Students may show or hide each option by selecting the “eye.”</p>  <p>Answer Masking will remain on in each multiple-choice item until it is turned off. To turn off Answer Masking, select the user drop-down menu and select <i>Disable Answer Masking</i>.</p>
					<p>To turn off Answer Masking, select the user drop-down menu and select <i>Disable Answer Masking</i>.</p>

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	5	TEI Drag and Drop	4.3c	From top to bottom: 8.13; 8.149; 8.698; 8.7	All of the boxes must contain an answer for this question to be considered “Answered.”

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	6	MC	4.3d	D $\frac{1}{5}$ and 0.2	<p>This question does not require the use of the ruler tool, but have students practice measuring the width and height of Model X using the centimeter ruler. This provides them the opportunity to practice manipulating the tool.</p> <p>There are two ruler tools on the top of the screen (). The icon on the left should be used to access the inch ruler and the icon on the right should be used to access the centimeter ruler.</p> <p>Have students select the centimeter ruler for this measurement. To move the ruler, select and drag the ruler over to the object to be measured. To rotate the ruler, select and drag an end with the circle. Have students practice moving and rotating the ruler. Selecting the ruler tool icon again will put the ruler tool away; or, select the pointer tool to put it away.</p> <p>The width of Model X is approximately 5.5 cm and the height is approximately 8.2 cm.</p> <div>  </div>

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	7	MC	4.6b	D 0.045 kg	
2	8	MC	4.6b	A 48 ounces	

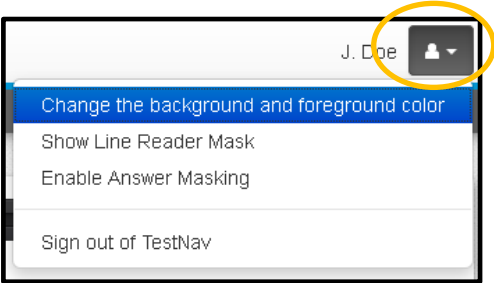
Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	9	TEI Hot Spot	4.7b	Both of these answers and only these answers should be selected: 4 yards and 144 inches	<p>Have students practice using the online calculator by selecting the calculator icon.</p>  <p>Once selected, the calculator will appear on the screen. Students can move the calculator across the screen by holding down inside the top of the calculator and dragging it to a new location.</p> <p>Make sure students familiarize themselves with knowing how to select and use the calculator if needed.</p>  <p>Selecting the calculator icon again will put the tool away; or, select the pointer tool to put the calculator away.</p> <p>This item specifies the number of answers a student must select. If a student tries to select more than the number of answers indicated, a message appears in the top right corner of the screen. This message will remain for approximately five seconds unless the “x” is selected to close the message. Have students try to select an additional answer so that they can see this message.</p> 

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	10	MC	4.9	B 2:20 P. M.	<p>Have the students use the highlighter functionality to highlight “2 hours and 35 minutes later” in the question.</p> <div> </div> <p>Have students try to highlight the clock. They will not be able to. Tell students that the highlighter tool will only work on text. It will not work on art (images/pictures).</p>
2	11	MC	4.9	C 3 hours 55 minutes	

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	12	TEI Hot Spot	4.12a	<p>All of these answers and only these answers should be selected:</p> <ul style="list-style-type: none"> • There are exactly four sides. • All sides must be congruent. • Both pairs of opposite sides must be parallel. 	Remind students that this is a hot spot technology-enhanced item and the number of correct responses is not indicated in the directions or in the question; therefore, the item will be considered “Answered” once the student selects one answer.
2	13	MC	4.13b	A letter W	
2	14	MC	4.13b	A the number line with the arrow pointing to $\frac{1}{2}$	

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	15	TEI Bar Graph	4.14	<ul style="list-style-type: none"> • The purple bar should reach the interval labeled 6. • The orange bar should reach halfway between intervals 10 and 12. • The green bar should reach halfway between intervals 6 and 8. • The pink bar should reach the interval labeled 4. • The yellow bar should reach halfway between intervals 12 and 14. 	<p>Have students practice dragging each bar to the desired height.</p> <p>Once one bar has been moved, the item will appear as “Answered” even if all of the bars are returned to the original heights.</p>
2	16	MC	4.14	C Year 4 and Year 5	

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	17	TEI Bar Graph	4.14	Both Brock's bar and Gwen's bar should have a bar height of 15.	
2	18	MC	4.15	B 68	
2	19	MC	4.16a	A 19	

Section	Question	Item Type	SOL	Answer Key	Guided Practice Suggestions
2	20	MC	4.16b	B $12 \times (7 \times 13) = (12 \times 7) \times 13$	<p>Have students practice with the accessibility feature that allows them to change the background and foreground color. Select the user drop-down menu and <i>Change the background and foreground color</i> from the menu.</p>  <p>There are six different options other than black on white, which is the default setting. Have students select a contrast setting and then the <i>Continue</i> button to enable this feature. This feature could be used by students who would benefit from the use of color contrasting to make text more distinct.</p> <p>This setting will remain enabled until turned off. To turn off this setting, select the user drop-down menu, select <i>Change the background and foreground color</i>, and then select the radial button next to the default setting. Then select the <i>Continue</i> button.</p> <p>Information for Teachers: This is the end of the practice item set. See pages 25-26 of the <i>Introduction to TestNav 8</i> document for information on closing TestNav.</p>